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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/656,325 | 09/06/2000 | Steven D. Nelson | 14073US01 | 9079 |

7590 03/18/2003

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EXAMINER

CHAMBERS, TROY

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 09/656,325 | Applicant(s) NELSON ET AL. | |
| | Examiner Troy Chambers | Art Unit 3641 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-13 and 20-65 is/are pending in the application.
- 4a) Of the above claim(s) 20-30 and 38-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-13,31-37 and 62-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I and Species B (claims 1, 4-13, 31-37 and 62-65) in Paper No. 16 is acknowledged. The traversal is on the ground(s) that "the field of search required to search the respective apparatus and method claims are *essentially* coextensive". This is not found persuasive because the MPEP requires the restriction between 2 or more inventions (MPEP 806.04) and/or 2 or more species (if number of species is reasonable) (MPEP 806.04(a)). The examiner has made a proper restriction/election of species requirement in accordance with the MPEP. Moreover, the burden of search is evidenced by the submission of over 30 additional claims after a first office action directed to several invention/species and the various classes/subclasses that must be searched as provided in the restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 64 and 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claim 65 recites, "one or more of said pyrotechnic devices comprise non-detonating initiators." However, a pyrotechnic is any

of various similar devices (as for igniting a rocket or producing an explosion). It is not possible to have a pyrotechnic device that is non-detonating.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4-12, 31-33, 35-37, 62 and 63 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6166452 issued to Adams et al. ("Adams").

Adams discloses a plurality of igniters 10 connected to a networked electronic ordnance system via a bus controller (ECU).

6. With respect to claims 1, 10, 31, 32, 34 and 62 refer to Adams, col. 4, line 64 to col. 5, ll. 6 (bus controller); col. 5, ll. 14-15 (plurality of igniters); and, col. 5, ll. 33-35 (unique signal).

7. With respect to claim 4, refer to Adams, col. 5, ll. 29-32 (multiplex signals).

8. With respect to claims 5, 8, 35 and 37, refer to Adams, col. 4, ll. 55-63 (storage capacitors with capacitance of 2.2 microfarads).

9. With respect to claims 6 and 9, refer to Adams, col. 4, ll. 10-18 and Figs. 6, 7 (bleed resistors).

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10. With respect to claim 7, refer to Adams, Fig. 5.
11. With respect to claims 11 and 12, refer to Adams, col. 5, ll. 1-13 (serial and parallel communications).
12. With respect to claims 33 and 63, refer to Adams, col. 5, ll. 52 to col. 6, ll. 8 (transmitting means, altering means, storing means, assigning means).
13. With respect to claim 36, refer to Adams, col. 3, ll. 54-56 (milliamps).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6341562 issued to Brisighella in view of Adams. Brisighella discloses a plurality (col. 1, ll. 37-38) of initiator assemblies 28 to initiate a cable cutter (col. 1, ll. 38). However, Brisighella does not disclose the networked system of Adams. Adams discloses an electronic ordnance system as described above. At the time of the invention, one of ordinary skill in the art would have found it obvious to provide the cable cutter (with initiator) of Brisighella with the bus ordnance system of Adams. The suggestion/motivation for doing so would have been to allow for the communication, testing and identification of each cutter (igniter) in the system.

16. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of U.S. Patent No. 6403887 issued to Kebabjian. Adams discloses a networked ordnance system as described above. However, Adams does not disclose the use of at least one shielded twisted pair cable. Kebabjian discloses a shielded twisted pair cable 10. At the time of the invention, one of ordinary skill in the art would have found it obvious to provide the network of Adams with the cable of Kebabjian. The suggestion/motivation for doing so would have been to prevent spurious noise and provide for high-speed communication.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.



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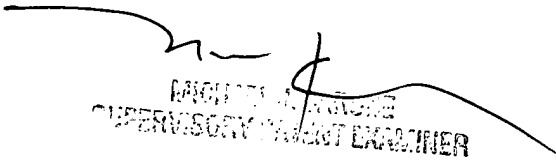
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18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents listed on form PTO-892 are cited as of interest to show similar network systems.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Troy Chambers whose telephone number is (703) 308-5870. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone, can be reached at (703) 306-4198.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-4177. The fax phone number for the organization where this application or proceeding is assigned is (703) 306-7687.


MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER